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Grade 10 Math Performance/Achievement Descriptors

Advanced	Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matte • Write a linear equation with slope other than one or zero given a table of values, graph, or description in words • Solve an equation in one variable that requires more than two steps • Write an equation involving trigonometric ratios to solve a real-world problem using • Identify the relevant theorem that justifies the congruence of two given triangles • Sort quadrilaterals on and off the coordinate plane by properties involving angles, sides, or diagonals • Identify a geometric shape that provides a counter-example to a given statement • Apply the Pythagorean Theorem to solve a problem that requires multiple steps • Calculate the area of a composite figure • Determine the number of unique combinations given a set of objects • Calculate the probability of a desired outcome given the probabilities of all other possible outcomes • Display data in a circle graph
Proficient	Students at this level demonstrate a solid understanding of challenging subject matter • Order rational numbers written as fractions, mixed numbers and decimals • Describe the effect of operations on arbitrary real numbers • Determine and interpret the slope of a linear function from a graph • Generalize a linear sequence of numbers with an algebraic expression • Describe the characteristics of smaller figures used to construct a three dimensional figure • Use relationships of angle and segments in a figure to determine similarity of polygons • Apply the Pythagorean Theorem to determine the length of leg of a right triangle • Convert among derived units to solve a problem • Apply the distance formula to problems involving the coordinate grid • Use probability to make predictions • Identify the appropriate display of a given set of data • Calculate the median of a set of data displayed in a frequency table
Nearing Proficiency	Students at this level demonstrate a partial understanding of subject matter • Evaluate a numerical expression with multiple operations on fractions • Use proportions or percents to solve a problem • Determine whether a given number is rational • Write and compare numbers in scientific notation • Write an inequality or equation with two variables to describe a real-world situation • Evaluate an algebraic expression for a given value • Determine whether a graphed function is linear or nonlinear • Associate a line graphed on the coordinate plane with its equation • Determine the coordinates of the image of a vertex of a polygon after a transformation • Identify the relationships among angles formed by parallel lines and a transversal • Apply the Pythagorean Theorem to determine the length of the hypotenuse of a right triangle • Compare the relative volumes of rectangular prisms • Identify a positive or negative correlation between two variables in a scatter plot

Novice	Students at this level demonstrate a minimal understanding of subject matte • Evaluate numerical expression with multiple operations on whole numbers • Identify a proportion that can be used to relate quantities in a real-world situation • Identify an inequality or equation with one variable that describes a real-world situation • Read a graph of a function on the coordinate grid to determine intervals of increasing and decreasing • Identify the shape of the cross section of a three dimensional figure with a drawing • Determine whether two variables have a correlation given a scatter plot • Interpret a circle, line, or bar graph